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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/217,633 | 12/22/1998 | MASAHARU NAKAMORI | 0505-047P | 4151 |

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EXAMINER

TRAN, HIEN THI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1764

14

DATE MAILED: 06/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/217,633

Examiner

Hien Tran

Applicant(s)

NAKAMORI ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 19 March 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1,4,6-8,11,13-15,17-20 and 22-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 4, 6-8, 11, 13-15, 17-20, 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 19 March 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 4, 6-8, 11, 13-15, 17-20, 22-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 15-18 "small" is a relative term and is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. See claims 8, 15, 20 likewise.

In claim 4, the claim appears to be conflict with the newly added limitation of "material of the case is the same as that of the honeycomb structure" in lines 15-18 of claim 1. See claims 11, 17, 22 likewise.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The art area applicable to the instant invention is that of catalytic converter.

One of ordinary skill in this art is considered to have at least a B.S. degree, with additional education in the field and at least 5 years practical experience working in the art; is aware of the state of the art as shown by the references of record, to include those cited by applicants and the examiner (*ESSO Research & Engineering V Kahn & Co*, 183 USPQ 582 1974) and who is presumed to know something about the art apart from what references alone teach (*In re Bode*, 193 USPQ 12, (16) CCPA 1977); and who is motivated by economics to depart from the prior art to reduce costs consistent with the desired product characteristics. *In re Clinton* 188 USPQ 365, 367 (CCPA 1976) and *In re Thompson* 192 USPQ 275, 277 (CCPA 1976).

6. Claims 1, 4, 6-8, 11, 13-15, 17-20, 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whittenberger et al (5,651,906) in view of Kohno et al (5,653,825), Arai et al (5,151,254) and Gulati (5,376,3441).

Whittenberger et al disclose a catalytic converter comprising:

a honeycomb structure shaped in a cylindrical form, said honeycomb structure having a plurality of channels (i.e. air vents) extending in an axial direction thereof; and

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a cylindrical case covering an outer peripheral surface of the honeycomb structure wherein the case is composed of stainless steel.

The apparatus of Whittenberger et al is substantially the same as that of the instant claims, but fails to disclose whether the stainless steel case may be ferritic stainless steel case containing Mo.

However, Kohno et al disclose the conventionality of using ferritic stainless steel containing Mo of less than or equal to 2% for constructing converter housing due to its excellency in stress corrosion cracking resistance.

It would have been obvious to one having ordinary skill in the art to use the ferritic stainless steel containing Mo as taught by Kohno et al as an alternate material for the converter housing in the apparatus of Whittenberger et al for an improved stress corrosion cracking resistance and since use of such is conventional and no cause for patentability here.

With respect to the newly added limitation, since the modified apparatus of Whittenberger discloses stainless steel for both casing and honeycomb structure, it inherently has the same small difference in the coefficient of linear expansions as that of the instant claims.

With respect to the limitation of a catalyst layer formed on an inner surface of the case, Arai et al discloses provision of coating a catalyst layer on the inside surface of the casing (col. 6, lines 39-42).

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It would have been obvious to one having ordinary skill in the art to coat the catalyst layer on the inside surface of the casing of Whittenberger et al so as to increase the exhaust gas cleaning effect as taught Arai et al.

Since Whittenberger et al discloses that the honeycomb structure and the casing are formed of stainless steel, apparently the structure and the casing will have a reduced linear expansion during warm up and use as that of the instant claims.

The modified apparatus of Whittenberger et al is substantially the same as that instantly claimed, but fails to disclose whether the catalytic converter may be located inside a muffler housing.

However, Gulati discloses the conventionality of providing an exhaust pipe connected to a muffler 12 containing a catalytic converter 20a therein.

It would have been obvious to one having ordinary skill in the art to provide an exhaust pipe connected to the muffler containing a catalytic converter therein in the modified apparatus of Whittenberger et al as taught by Gulati to purify exhaust gas as well as to absorb noise, as such is conventional in the art and no cause for patentability here.

Response to Arguments

7. Applicant's arguments filed 3/19/02 have been fully considered but they are not persuasive.

Applicants argue that Whittenberger fails to disclose a stainless steel casing. Such contention is not persuasive since Whittenberger discloses a stainless steel casing (col. 6, lines 41-45).

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Applicants argue that Whittenberger does not disclose stainless steel containing Mo. Such contention is not persuasive as the secondary reference, Kohno et al, is relied upon for such teaching.

In response to applicant's argument that the object of Kohno et al in using less than 2 % of Mo is different from the object of the instant invention, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

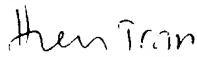
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien Tran whose telephone number is 308-4253. The examiner can normally be reached on Tuesday-Friday from 7:30AM-6:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marian Knode can be reached on 308-4311. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0661.

HT
June 3, 2002


Hien Tran
Primary Examiner
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